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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,656	05/30/2000	Ivo Raaijmakers	ASMEX.137C1	2013

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EXAMINER

LEO, LEONARD R

ART UNIT	PAPER NUMBER
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3743

DATE MAILED: 06/03/2003

18

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/584,656

Applicant(s)

RAAIJMAKERS, IVO

Examiner

Leonard R. Leo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2002 and 18 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 53-59, 65, 67-69 and 71-77 is/are pending in the application.
- 4a) Of the above claim(s) 56-58, 67 and 77 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 53-55, 59, 65, 68, 69 and 71-76 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 3, 2002 has been entered.

Claims 53-59, 65, 67-69 and 71-77 are pending, and claims 56-58 and 67 remain withdrawn.

In applicant's response filed March 18, 2003, claim 77 is directed to a nonelected species.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "actively cooled thermal exchange member" in claims 65 and 76 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claim 65 is objected to because of the following informalities: "substrate" in line 4 should read -- substrate --. Appropriate correction is required.

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***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 53-55 and 59 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: structure to provide "substrate treatment."

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 53-55, 59, 65, 68-69 and 71 as understood are rejected under 35 U.S.C. 102(b) as being anticipated by Bahng.

Regarding claim 53, the recitation of "for high temperature treatment of substrates" is considered to be a statement of intended use, even if claimed, does not merit patentable weight unless the body of the claim refers back to, is defined by, or otherwise draws life and breadth from such intended use. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Although, the claim language contains a "means plus function" clause, the function is considered to recite "for moving the movable element between a substrate treatment position within the chamber and a heat transport position within the chamber." As noted in the 35 USC 112(2) rejection above,

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there is no structure to provide "treatment" of the substrate. However, the "heat exchange member" is positively recited to support the "heat transport position."

Claims 65, 68-69 and 71 are rejected under 35 U.S.C. 102(b) as being anticipated by Hughes (column 4, lines 25-28).

Claims 65, 68-69 and 71 are rejected under 35 U.S.C. 102(e) as being anticipated by Kroeker (Figure 7, column 7, lines 13-22).

In this rejection of claims 65, 68-69 and 71 above, the recitation of "supporting a substrate ... at a substrate processing position" and the "wherein" clause have not been given patentable weight because they are narrative in form. In order to be given patentable weight, a functional recitation must be expressed as a "means" for performing the specified function, as set forth in 35 USC § 112, 6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. *In re Fuller*, 1929 C.D. 172; 388 O.G. 279.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 72-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohmine et al in view of Bahng.

Ohmine et al discloses all the claimed limitations except a heat exchange member.

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Bahng discloses a heat exchanger comprising a processing chamber 14; a substrate support/movable member 74; and a heat exchange member 18 for the purpose of actively cooling the substrate.

Since Ohmine et al and Bahng are both from the same field of endeavor and/or analogous art, the purpose disclosed by Bahng would have been recognized in the pertinent art of Ohmine et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Ohmine et al a heat exchange member for the purpose of actively cooling the substrate as recognized by Bahng.

#### ***Response to Arguments***

The Examiner notes applicant's remarks with respect to functional language. Applicant is free to draft the claims in any manner. However, the functional language is given no patentable weight. The cited case law does not state how the functional language is treated. It merely states functional language is not indefinite.

Applicant's remarks with respect to Bahng, Hughes and Kroeker are not persuasive. Applicant does not recite a single chamber having structure lending itself to processing and cooling.

With respect to the obviousness rejection, the combination of Ohmine et al and Bahng teach one of ordinary skill in the art to employ in Ohmine et al a heat exchange member for the purpose of actively cooling the substrate. The primary reference of Ohmine et al discloses a conventional RTP (Rapid Thermal Processing) apparatus having external heaters 4 providing heat through the housing 3 (typically quartz) to substrate 1 on movable support 2 via drive

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mechanism 5. The substrate is moved into an upper heating/treatment position and a lower cooling position away from the heaters. In the same manner, Bahng discloses a device having an upper treatment/processing position and lower cooling position. Cooling is facilitated by a heat exchange member forming the bottom wall of the chamber in Bahng. It would have been obvious to one of ordinary skill in the art to employ in Ohmine et al a heat exchange member for the purpose of actively cooling the substrate as recognized by Bahng.

***Conclusion***

Any inquiry of a general nature, relating to the status of this application or clerical nature (i.e. missing or incomplete references, missing or incomplete Office actions or forms) should be directed to the Technology Center 3700 Customer Service whose telephone number is (703) 306-5648. Status of the application may also be obtained from the Internet: <http://pair.uspto.gov/cgi-bin/final/home.pl>

Any inquiry concerning this Office action should be directed to Leonard R. Leo whose telephone number is (703) 308-2611.



LEONARD R. LEO  
PRIMARY EXAMINER  
ART UNIT 3743

June 1, 2003